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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,595	04/28/2000	Madeleine Prigent	Q58982	3132

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EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/559,595

Applicant(s)

PRIGENT ET AL.

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The rejection of claims 1, 3-7 and 9-14 under 35 U.S.C. 112, first paragraph as set forth in the Office Action of August 27, 2003 is moot in view of applicants' amendments.

The rejection of claims 12-15 under 35 U.S.C 112, second paragraph is moot in view of applicants' amendments.

The indicated allowability of claim 16 is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-7 and 9-15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for at least one covering layer comprising a thermoplastic polymer or a photopolymerizable resin and a composite material (claim 1) or a method of manufacturing a composite material comprising treating an inorganic compound and mixing said treated inorganic compound thereby obtaining said composite material (claim 15), does not reasonably provide enablement for a covering layer wherein the organic compound selected from polymers, monomers, and oligomers is different from the thermoplastic polymer or photopolymerizable resin (claim 1), nor a method of making a composite material wherein the composite material

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is in the form of particles (claim 15). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. As to claim 1, while the specification broadly teaches that the organic compound can be selected from polymers, monomers, and oligomers, there is no support in the specification that the organic compound can be different from the polymer or resin of the covering layer as embraced by amended claim 1. As to claim 15, the specification teaches a method of making a composite material comprising the steps of treating an inorganic compound, and mixing said treated inorganic compound with an organic compound, wherein this mixture can be further processed by extrusion or molding, but does not teach the recovery of composite particles as set forth in claim 15. Claims 3-7 and 9-14 do not rectify claim 1 and thus are not commensurate in scope with the enabling disclosure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasumi et al, 4,810,734 (Kawasumi) or Okada et al, 4,739,007 (Okada).

Kawasumi teaches a process for producing a composite material composed of a polymer and a layered silicate clay mineral. The process comprises contacting the clay mineral with a treating agent (column 2, lines 42-45) and mixing the treated clay mineral

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with a monomer (column 4, lines 56-60) per claim 15 and the treating agent can be an ammonium salt as required by claim 16. See column 3, lines 33-64. While not specifically referring to the treating agent as a compatibility agent, Kawasumi teaches that in the mixing step the treated clay mineral is uniformly mixed with ease allowing it to be uniformly dispersed in the intended composite material (column 2, lines 19-27). This teaching clearly suggests that the treating agent of Kawasumi functions as a compatibility agent. As to the limitation of mixing at a temperature higher than the softening temperature or melting temperature, Kawasumi teaches reacting at temperatures of 250° C. It should be noted that applicants' claims are not specific as to the particular organic compound; accordingly, the teachings of Kawasumi necessarily encompass mixing at a temperature higher than the softening temperature or melting temperature of the organic compound. Regarding the size of the inorganic particles, Kawasumi is silent as to the particle size, however, it is the examiner's position that changes in size are not a matter of invention. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Therefore, the teachings of Kawasumi would have rendered obvious the invention as claimed in present claims 15-16.

Okada teaches a process for making a composite material comprising treating a silicate material that can be a clay with a treating agent and mixing with a monomer at a temperature higher than the melting point of that monomer, per claim 15. See column 2, lines 54-63, column 4, line 20, and column 7, lines 20-24. In addition, Okada teaches that the treating agent can be of the type contemplated by applicants in claim 16 and that the treating agent facilitates the intake of polymer between the silicate layers of the

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clay mineral. See column 4, lines 45 through column 5, and line 14. While not specifically teaching a "compatibility agent" Okada teaches that his silicate is uniformly dispersed in the resin matrix material. This teaching necessarily suggests that the treating agent of Okada enhances the compatibility of the silicate and matrix resin. As to the size of the clay, Okada teaches at column 4, lines 36-38, that the clay material can be ground into the desired size and shape. This teaching would have provided a suggestion to the skilled artisan to choose and determine the size of the clay particles commensurate with the desired end use. Moreover, changes in size and shape are not a matter of invention. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Therefore, the teaching of Okada would have rendered obvious the invention as claimed in present claims 15-16.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-7, and 9-15 have been considered but are moot in view of the new ground(s) of rejection.

No claims are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In particular, applicants' attention is directed to the following:

1. Fomperie et al, US 2002/0010248 A1 – Fomperie et al teaches nanocomposites comprising a clay and a polymeric organic compound, additionally teaching cables comprising optical fibers and having said nanocomposites incorporated in their sheath or coating layer. See claims 1, 9 and 12.

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2. Taylor et al, US 6,415,090 B1 – Taylor et al teaches optical fibers having a dual coating wherein the outside coating is improved by the addition of clay platelets. See claim 9.
3. Dixon et al, US 6,430,344 B1 – Dixon et al teaches a communications cable comprising optical fibers and a resin having clay platelets incorporated therein. See claims 1, 2, 3, 16, 17, and 18.
4. Aylward et al, US 2004/0028369 A1 – Aylward et al teaches a waveguide clad with one or more polymeric layers, wherein at least one of said layers comprises layered particles dispersed in a polymeric binder. See claims 1, 14, 15, 25, and 26.